

WHAT IS CLAIMED IS:

1. An image capturing apparatus for capturing image data on the basis of a light image acquired by an optical system, comprising:

a focusing member for achieving focus by moving said optical system to an infocus position; and

a controller for moving a position of a focus area which is set in an image formed by the light image so that the focus area includes a main subject, determining a present focus position from a plurality of pieces of information in the focus area, obtained by driving said optical system around a reference position determined on the basis of a prior infocus position, and moving said optical system to the present infocus position by controlling said focusing member, wherein

at the time of losing track of the main subject during its control, said controller continues to drive said optical system around a reference position determined on the basis of the latest infocus position.

2. The image capturing apparatus according to claim 1, wherein

at the time of losing track of the main subject during its control, said controller continuously uses a focus area in which the latest infocus position is obtained.

3. The image capturing apparatus according to claim 1, wherein

at the time of losing track of the main subject during its control, said controller specifies an area of which image information is similar to image information of the focus area in which the latest infocus position is obtained,

and uses the focus area specified.

4. The image capturing apparatus according to claim 1, wherein when the main subject cannot be found after continuing to drive said optical system for predetermined time around the reference position determined on the basis of the latest infocus position, said controller determines a present infocus position irrespective of the reference position determined on the basis of the latest infocus position.

5. The image capturing apparatus according to claim 4, wherein at the time of determining a present infocus position irrespective of the reference position determined on the basis of the latest infocus position, said controller uses a focus area in a predetermined default position.

6. The image capturing apparatus according to claim 1, wherein the reference position determined on the basis of the latest infocus position when the track of the main subject is lost during control of said controller is the latest infocus position itself.

7. The image capturing apparatus according to claim 1, wherein the reference position determined on the basis of the latest infocus position when the track of the main subject is lost during control of said controller is determined on the basis of infocus positions at a plurality of time points in the past.

8. The image capturing apparatus according to claim 1, wherein the plurality of pieces of information in the focus area obtained by driving said optical system around the reference position is information obtained on both sides of the reference position.

9. The image capturing apparatus according to claim 4, wherein at the time of losing the track of the main subject during its control, said controller specifies an area of which image information is similar to image information of the focus area in which the latest focus position is obtained, and

when the main subject cannot be found after continuing to drive said optical system for predetermined time around the reference position determined on the basis of the latest infocus position, said controller determines the present infocus position in the area specified irrespective of the reference position determined on the basis of the latest infocus position.

10. The image capturing apparatus according to claim 1, wherein when the track of the main subject is lost during control of said controller, a wide focus area is used.

11. The image capturing apparatus according to claim 10, wherein at the time of losing the track of the main subject during its control, said controller specifies an area of which image information is similar to image information of the focus area in which the latest infocus position is obtained, and

when the main subject cannot be found after continuing the driving of said optical system for predetermined time around the reference position determined on the basis of the latest infocus position, said controller determines the present infocus position in the area specified irrespective of the reference position determined on the basis of the latest infocus position.

12. The image capturing apparatus according to claim 11, wherein the wide focus area is divided into a plurality of equal partial areas, and an area having similar image information is selected from the partial areas.

13. The image capturing apparatus according to claim 3, wherein the image information is brightness information or color information.

14. The image capturing apparatus according to claim 1, wherein a plurality of local focus areas in different positions are set in an image, and the focus area is selected from the local focus areas.

15. The image capturing apparatus according to claim 14, wherein at the time of losing the track of the main subject during its control, said controller selects an area of which image information is similar to image information of the focus area in which the latest infocus position is obtained from the local focus areas, and uses the selected area.

16. An image capturing apparatus comprising:

an optical system for capturing a light image including a subject;  
a driver for driving a focus lens of said optical system;  
an image sensor for converting the light image into image data;  
a renewing part for renewing the position of a focus area set in an image in which the image data is obtained on the basis of movement of the subject;

a controller for controlling said driver on the basis of image information in the focus area to move the focus lens to an infocus lens position in which a focusing state can be achieved; and

a selector capable of switching a control mode of said controller between (1) a first control mode of specifying a present infocus lens position from the image information obtained by driving the focus lens around a reference lens position determined on the basis of a prior infocus lens position, and (2) a second control mode of specifying a present infocus lens position independently of the prior infocus lens position, wherein

when the present infocus lens position becomes unspecified during control in the first control mode, control in the first control mode is continued.

17. The image capturing apparatus according to claim 16, wherein the position of the focus area during a continuous control is fixed to a position renewed immediately before a time point when the infocus lens position became unspecified.

18. The image capturing apparatus according to claim 16, wherein

a similar area of which image information is similar to the image information in the focus area in the position renewed immediately before a time point when the infocus lens position became unspecified can be specified, and

the position of the focus area during a continuous control is fixed to a position of a similar area.

19. The image capturing apparatus according to claim 16, wherein when the infocus lens position cannot be specified after performing a continuous control for a predetermined time, the control mode is switched to the second control mode.

20. The image capturing apparatus according to claim 19, wherein the position of the focus area in the second control mode is a predetermined default position.